33023

TV COLOR TELEVISION

M 82-102 IDTV
M 95-102 IDTV

(D) = Seite 2
(I) = Pagina 78
(S) = Sidan 153
(E) = Página 228
(GB) = Page 28
(NL) = Pagina 103
(DK) = Side 178
(F) = Page 53
(P) = Página 128
(SF) = Sivu 203

GRUNDIG

D2-77

Technische Daten

Netzspannung:

220-240V, 50/60Hz
(Regelbereich des Netzteiles 190 ... 264V)

Aufnahme:

ca. 175Wh
In Bereitschaft (stand by) 5Wh

Empfangsbereiche:

C01 ... C99
Sonderkanäle S01 ... S41

Tonendstufe:

Stereo 100 Watt aktiv Musikleistung

Service-Hinweise für den Fachhandel:

Das Netzkabel dieses Fernsehgerätes ist steckbar ausgeführt. Für Ersatzzwecke bestellen Sie es bitte bei einer Kundendienststelle.

Bestell-Nr. für M 82-102 IDTV: 8290-991-307
Bestell-Nr. für M95-102 IDTV: 8290-991-308

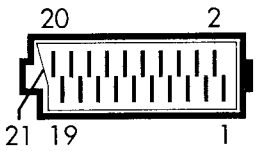
Das Gerät entspricht den VDE-Sicherheitsbestimmungen und den Vorschriften der Deutschen Bundespost (Zulassungs-zeichen siehe Typenaufkleber auf der Geräterückseite), ferner der Verordnung über den Schutz vor Schäden durch Röntgenstrahlen. Die Röntgenstrahlung – verursacht durch die Bildröhre – ist ausreichend abgeschirmt und darum völlig ungefährlich. Beschleunigungsspannung max. 34kV/ mittlerer Strahlstrom1,5mA.

Unsachgemäße Eingriffe, insbesondere Verändern der Hochspannung oder Einbau eines anderen Bildröhrentyps, können dazu führen, daß Röntgenstrahlung in erheblicher Stärke auftritt. So veränderte Geräte entsprechen nicht mehr dieser Zulassung und dürfen nicht betrieben werden.

Kontaktbelegung EURO-AV-Buchse ⑭

Wenn Sie an das Fernsehgerät Zusatzgeräte anschließen wollen (z.B. Computer, Verstärkeranlage), dann kann Ihr Fachhändler anhand der folgenden Anschlußtabelle eine normgerechte Verbindung herstellen:

Stift		Signal
1	=	Audio Ausgang rechts
2	=	Audio Eingang rechts
3	=	Audio Ausgang links
4	=	Audio Masse
5	=	Blau Masse
6	=	Audio Eingang links
7	=	RGB Blau Eingang
8	=	Schaltspannung
9	=	Grün Masse
10	=	–
11	=	RGB Grün Eingang
12	=	–
13	=	Rot Masse
14	=	Masse
15	=	RGB Rot Eingang
16	=	RGB Schaltspannung
17	=	Video Masse
18	=	RGB Schaltspannung Masse
19	=	Video Ausgang
20	=	Video Eingang
21	=	Abschirmung/Masse



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Notes on Setting Up

You now own a GRUNDIG color television of the »Monolith« series which offers you the newest and most advanced 100Hz/IDTV technology, rendering an entirely new standard in picture quality.

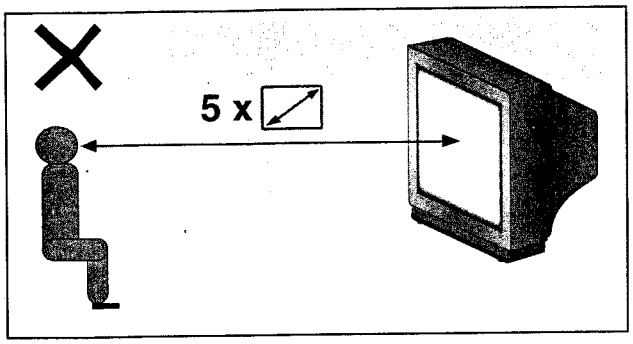
A 21/4 megabit digital memory together with 100Hz/IDTV electronics (IDTV = Improved Definition Television) doubles the frame frequency from the conventional 50 frames to 100 frames per second, making disturbing edges and overall flickering things of the past.

This remarkable flicker-free picture is easy on the eyes and makes television viewing relaxing and enjoyable.

Setting up

When setting up your television, select a location where as little light as possible falls on the screen.

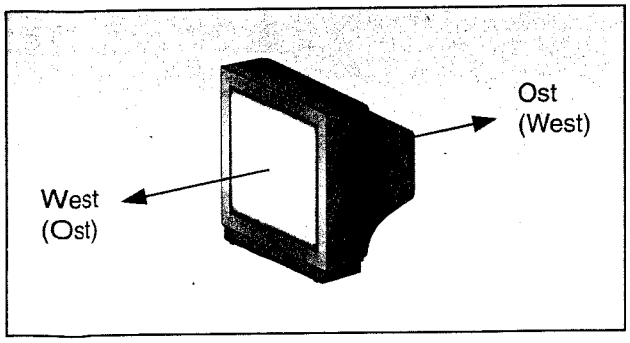
The ideal viewing distance is five times the diagonal width of the screen. See the illustration below.



The magnetic field of the earth has a varying strength. Depending on the installation direction of the set, it can affect its colour purity.

Colour purity errors are colour aberrations occurring as coloured zones on the picture screen.

For installing the TV set, the west/east direction has proved to be the best solution.



Take care that the set is not rotated during operation.
This mightlead to colour aberrations.
Transport the set to another location only when it is switched off.

For your safety

Never place the television near heat sources.

Do not cover the ventilation openings on the back.
The television generates heat which must be able to escape.

Heat build-up can reduce the service life of your television, and can also be dangerous.

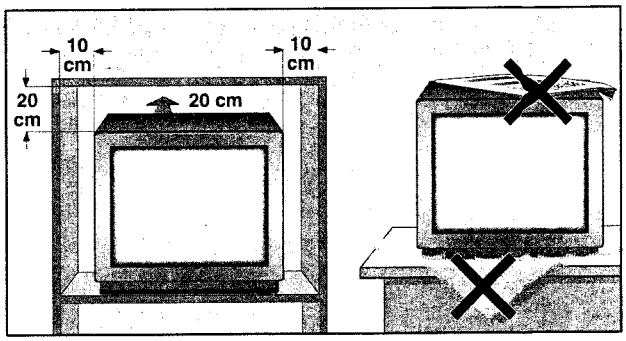
For this reason, if the television is to be built into a wall or similarly enclosed, the minimum distances specified below must be maintained.

Ensure that the unit is never exposed to water in any way!

If you will not be using your television for a longer period of time (including overnight), you should then switch it off using the main switch on the unit.

Even if the unit is switched off, it can still be damaged by lightening charges via the power supply and/or antenna lines.

For this reason, you should always remove the power supply plug and antenna jack during severe thunder storms.



Cleaning the picture screen (M 95-102 IDTV)

The TV receiver is provided with a Lavender-picture tube with a special surface layer.

This have the advantage of an antistatic effect, i.e. the surface does not attract dust particles.
When the set is switched on, static charges of the picture screen are avoided to a large degree by the special surface layer.

Clean the picture screen of your TV set only with a moistened soft cloth.
Use clear and clean water only.
When cleaning the picture screen, do not apply pressure (abrasion, scratches).

Do not stick labels of any kind onto the picture screen.

Connections and Operating Features

Unit front

① Mains switch = for switching on and off

② = Stand by
is indicated by an illuminated point in the display

③ Headphones connection = Headphone socket, 3,5mm∅

④ Setting button = Volume adjustment

⑤ Setting button = Channel selection

⑥ Display
What is displayed depends on the current mode, for example

P 49 = Channel 49 is on
C 12 = Channel 12 entered
S 18 = Special channel 18 entered
A 1 = Video mode via the black Euro-AV socket
A 2 = Video mode via the blue Euro-AV socket
A 3 = Operation of other units via the cinch FBAS socket (for example, a camcorder)
A 4 = S-VHS video recorder, S-VHS camera or Hi8 camcorder mode via the S-Video socket
A 5 = S-VHS video recorder or Hi8 video recorder via the black EURO-AV socket

Changing brightness in display:
AUX and - ☼ +.

Unit rear

⑦ Loudspeaker sockets = Connection for external loudspeakers. DIN 41529

⑧ Cinch sockets = Connections for a hifi system,
R = output, RH channel,
L = output, LH channel.

⑨ Loud-speaker switch = for operation with external loudspeakers
(wide-band system of bass box).

⑩ S-VIDEO socket = Connection (picture) for S-Video recorder or camcorder

⑪ Cinch-FBAS = Connection (picture) for units with FBAS output socket (for example, cam corder, computer)

⑫ Cinch-socket = Connection for (sound) Eingang for FBAS and S-Video
R = input, right channel
L = input, left channel (for mono)

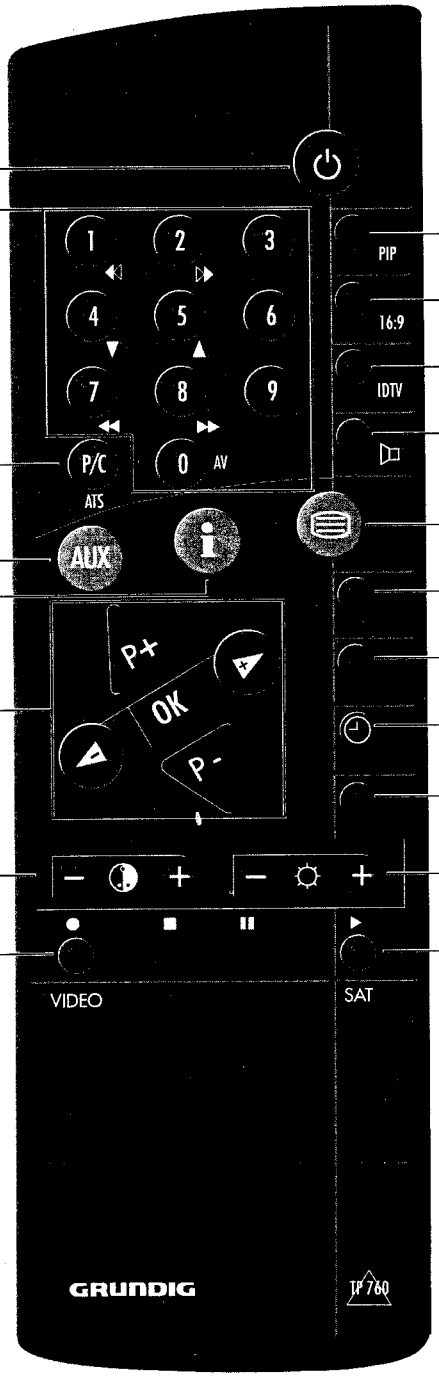
⑬ EURO-AV socket (blue) = Standard connection for video units

⑭ EURO-AV socket (black) = Universal connection DIN EN 50049
Video and RGB connection possible

⑮ = Input socket for 12V commercially available power supply unit
Required when recording on a video recorder - from a satellite receiver for example - in the transfer mode when the unit is switched off.

⑯ Ψ-socket = Coaxial aerial socket, 75Ω
DIN 45325 IEC 169-2

The Remote Control



⏻ Switch to stand by

1-0 Channel selection, and switching on
AV the television from stand by, as well as
- Selection of AV position
- Direct channel selection (after pressing the P/C button
- Entry of page numbers in teletext mode

P/C Selection of Program/Channel/Special channel. Keep the button depressed 4 sec., ATS ap pears

AUX Selection buttons for various functions:

i Calling up the Info Center. After appearance of OK in menu, press OK button.

P+ Individually switch channels (1, 2, 3 ...)

P- Individually switch channels (... 3, 2, 1)

>or<

P+ Cursor movement up,
P- Cursor movement down

OK - Calling up basic setting of the television (picture and sound)

- Changing and activating various functions in teletext

◀ ▶ Volume adjustment

>or<

◀ ▶ Move cursor to the right, to the left

Color contrast

VIDEO Video recorder remote control (keep VIDEO button depressed)

PIP Picture-in-picture, on/off

16:9 Change picture format 4:3 ↔ 16:9

IDTV Access to IDTV menu (Special function)

Sound ON/OFF (mute)
Access to audio menu

Teletext mode ↔ TV mode

Updating of displayed freeze-frames (Multipicture)

Freeze frame

Time on/off

Current channel/Subtitle

Brightness

SAT Satellite receiver remote control (keep SAT button depressed)

Assigning Channels

The remote control is the central control unit for your television set.

All control functions and basic settings can be carried out with the remote control.

To operate your remote control, you must first insert the battery supplied. Note the markings inside the battery compartment.

The remote control is provided with decals. This allows you to write down channel positions you select when you set your television up.
There is a depression on the rear of the remote control where the decal can be conveniently attached.

When the battery is dead, »Telepilot Battery« appears on the screen.

However, you should always replace a weak battery in good time. We can assume no liability for damage which may result from damaged batteries.

Assigning Program Positions for television channels

Television stations broadcast their programs on their own channels.

These channels must be assigned to channel positions in the television.

It is only necessary to make these settings once, when you set up your television for the first time, or if reception conditions change (for example, if you move to another location, or if you are subsequently connected to a cable television source).

This television is equipped with **ATS euro plus** (Auto Tuning System). The special feature of this new system is the **automatic channel programming.**
This channel search and memory system scans the entire reception range, stores the programs found and enters them, with the accompanying station identification, in a table.
You can, of course, alter this automatic allocation of program positions as you wish, and channels without identification can be assigned a name from the displayed list of abbreviations.

Switching on

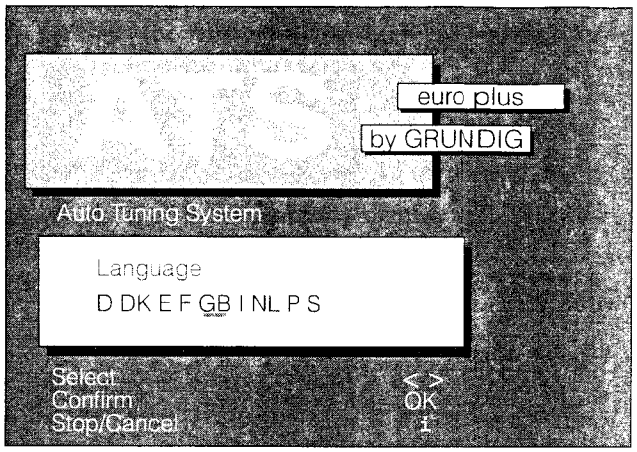
Switch the television on with the power switch ②.

The first page of »ATS euro plus« appears.

If the first page does not appear, you can call it up by pressing the **P/C** button (for approx. 4 seconds).

At the bottom of this display – as with all other displays – is a dialogue line consisting of words and symbols. The symbols are identical to the ones on the remote control.

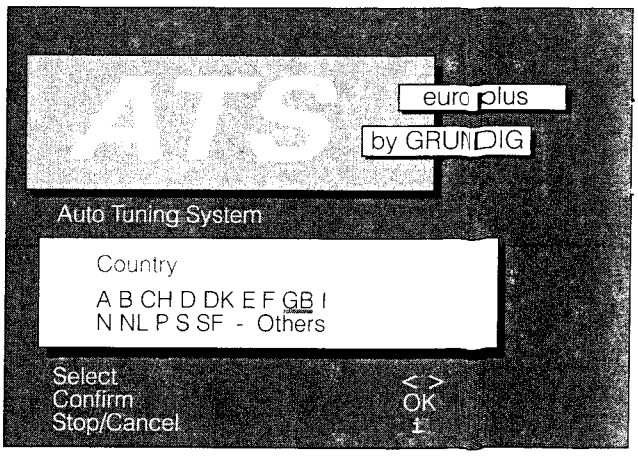
Only those symbols (buttons) shown on the screen at the moment can be used to call up functions. This system is called the user guide, and is referred to in the sections which follow.



This television makes interacting with and responding to the on-screen dialogue easy by offering you a wide selection of languages to choose from. After you select a language, all messages and information which subsequently appear on the screen will be in this language. German is preset at the factory. If you want to select another language, proceed as follows:

Using the ◀ or ▶ button, move to the desired country identification letter.

Press the **OK** button.
The next page appears for selecting your location (country).



Germany is preset at the factory.

Assigning Channels

If your location (country) is A, D, DK, E, GB, I, N, P, S or SF, proceed as follows:

Select the country using the ◀ or ▶ buttons.

Press the **OK** button. This starts the ATS euro plus.
The search process automatically sorts those channels which are available.

At the conclusion of the search process, the TV Station Table is displayed.

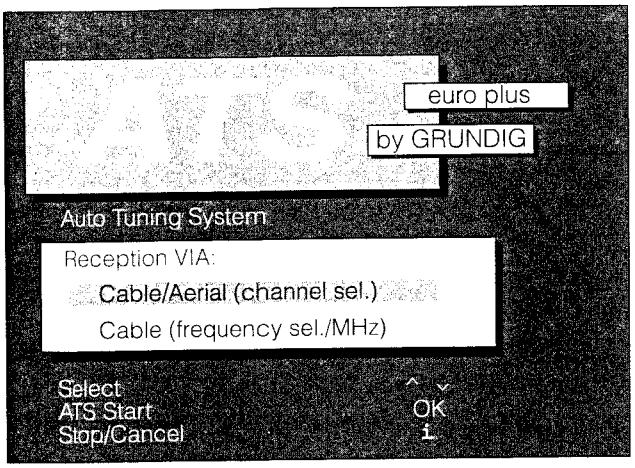
If your location (country) is B, CH, F, NL or another country displayed, proceed as follows:

Select the country using the ◀ or ▶ buttons.

Confirm with the **OK** button

The search process automatically sorts those channels which are available.

The next page appears.



If you have access to a normal cable or aerial system, no changes are required.

If your television is connected to a cable system which does not transmit at normal channel separation (channel frequency arrangement), you must select »Cable (frequency sel./MHz)«.

In case of doubt, consult your dealer.

Press **P-** if you want to select »Cable (frequency sel./MHz)«.

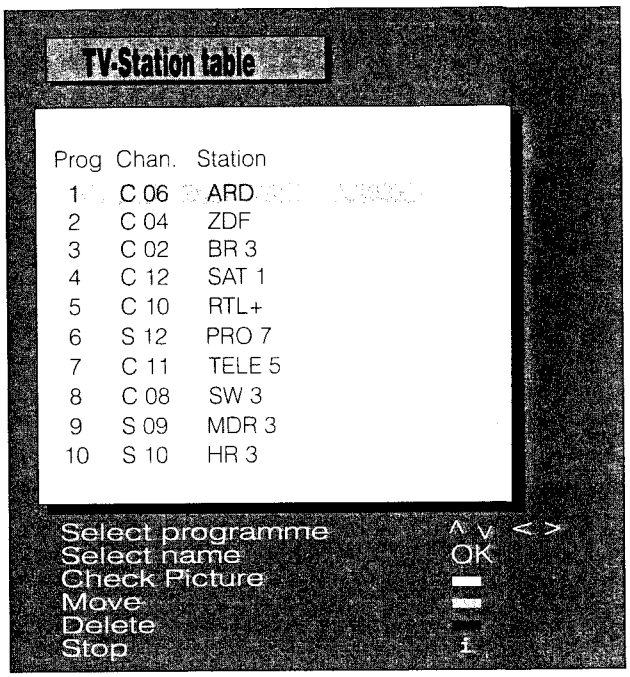
When you press **OK**, ATS starts and stops at the first channel with sufficient reception quality.
The screen page for the fine adjustment of the picture and the adjustment of the television standard is displayed (only if you have selected »Cable (frequency sel./Mhz)«.
The television standard is adjusted automatically.

If required, you can adjust the quality of the picture by using the ◀ or ▶ button.

Press the **OK** button to add the channel to the TV Station Table.

If you do not want to add the channel to the TV Station Table, press the **red** button.

At the conclusion of the search, the sorted TV Station Table appears.



Changing the order of the automatically sorted channels

Press **P-** or **P+** to select the channel position data you wish to move.

Press the **yellow** button.

Press button **P-** or **P+** and move the channel position data you wish to move.

To conclude, press the **OK** button.

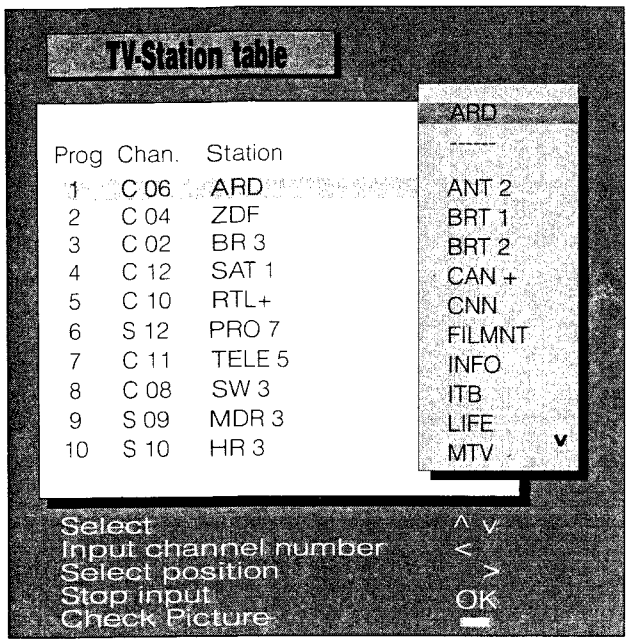
Assigning Channels

Entering Station Identification

Select the channel position whose station identification you want to reenter or change.

Press the **OK** button.

A list of station abbreviations appears.



Use button **P+** or **P-** to select the desired station name (abbreviation).

To enter the selected name, press the **OK** button.

If you cannot find the desired name, or it is unavailable, proceed as follows:

Press ▶ once to select the first letter of the station identification.

Press the **P-** or **P+** button until the desired letter appears.

Enter the letter by pressing the **OK** button.

Concluding ATS

press **i**.
Press the **OK** button, and the channel assignment is stored.

If you do not want to enter the channel assignment, press the **AUX** button.

The TV Station Table disappears from the screen.

Assigning channel positions manually.

Select free channel position where the new channel is to be saved.

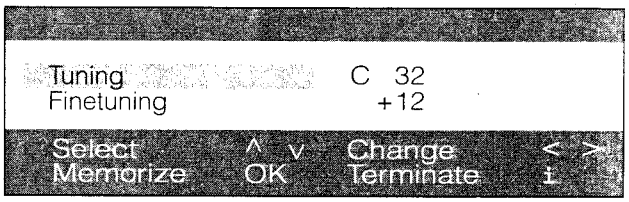
Press **P/C** button;
a channel number or frequency display in Mhz is shown.

When a channel number (C for channel) or special channel number (S for special channel) appears, you can select from between S, C and P by pressing the **P/C** button.

When a channel number is displayed, you can use the numeric buttons to enter the desired channel number directly; e.g. 34.

In the case of a frequency display, it is only possible to make channel assignments by using the automatic channel search (automatic channel search can also be used when channel number is displayed). You must:

Press **P+** button.
The tuning-menu appears.



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Pressing the ◀ or ▶ button activates the automatic channel search.

With the **P-** or **P+** button you can select finetuning.

»Finetuning« can be changed using the button marked ◀ or ▶.

Press **OK** button. The set values are saved.

If, for example, the channel 00 is entered and saved in the channel position P 12, you can only select the channel positions from P01 to P11 and A1 to A5 by using the **P-** or **P+** buttons.
The setting has no effect on input using the numeric buttons **0...9**.

Special Functions

Special functions in TV mode

Freeze-frame

This »freezes« a picture during a program.

Press the **yellow** button.

Press the **yellow** button once more, or the **i** button to end this function.

Picture-in-Picture

This »freezes« a micro-picture during a program.

Press the **PIP** button.

Press the **i** or the **PIP** button to end this function.

Picture in a Freeze-frame

You can display a micro-picture in the freeze-frame of the same program.

Press the **AUX** button- »AUX« appears on the screen - while »AUX« is still on the screen, press the **PIP** button.

Press the **i** or the **PIP** button to end this function.

Multipicture

With this function, you can call up a series of 9 micro-pictures - eight of which appear sequentially - and display them on the screen.

The micro-picture at the bottom right shows the current program.

Press the **blue** button.

Every time you press the blue button, the eight micro pictures are updated.

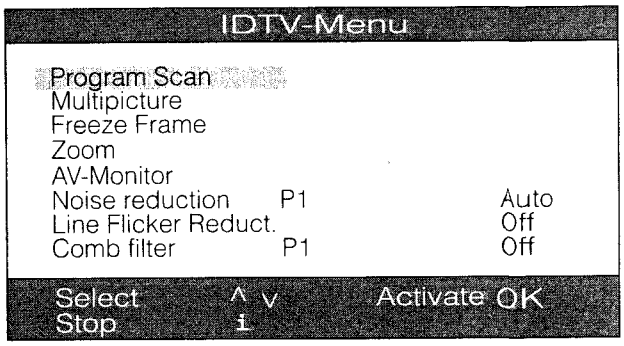
Pressing the **i**, **ITDV** button or changing to another channel ends this function.

The IDTV menu

Tuner scanning

This function enables you to call up nine different channels and display them on the screen as freeze-frames (but without sound) with their station identification abbreviations.

Press the **IDTV** menu to call up the IDTV menu.



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Select the line »Program Scan« using the **P+** or **P-** buttons.

Press the **OK** button.

The micro-pictures are updated one after the other in brief intervals.

You can switch backwards or forwards by nine channels using the **P+** or **P-** buttons.

If you want to select a channel from the ones displayed, enter the desired channel position with the numeric buttons.

P1/P10/P19/P..	P2/P11/P20/P..	P3/P12/P21/P..
Numeric button **1**	Numeric button **2**	Numeric button **3**
P4/P13/P22/P..	P5/P14/P23/P..	P6/P15/P24/P..
Numeric button **4**	Numeric button **5**	Numeric button **6**
P7/P16/P25/P..	P8/P17/P26/P..	P9/P18/P27/P..
Numeric button **7**	Numeric button **8**	Numeric button **9**

Press the **i** or the **IDTV** button to end this function.

Zoom

With this function, you can select a section of the picture and enlarge (and move) it, including freeze-frames.

Press the **IDTV** button to call up the IDTV menu.

Select the line »Zoom« with **P+** or **P-**.

Press **OK**.

The enlarged section of the picture can be moved by using the **P+**, **P-**, ◀ or ▶ buttons.

Pressing the **i**, **ITDV** button or switching to another channel ends this function.

Special Functions

The television set as a Monitoring System

Example: You want to monitor a child´s bedroom with a video camera yet continue to watch television.

Proceed as follows:

Connect camcorder to the black, blue, S-Video- or FBAS-socket.

Select the corresponding AV-position with the **0 AV** button.

Select the desired channel.

Press **IDTV** to call up the IDTV menu.

In the menu, select AV-Monitor and confirm with the OK button. The picture from the child´s room appears as a freeze-frame (micro-picture), and is thereafter continuously updated.

When the **0 AV** button is pressed, the TV channel appears as a micro-picture.

In place of the video camera, a video recorder can also be connected, and its tape contents can be displayed on the screen.

Pressing the **i** button or separating the connected units ends this function.

Noise reduction

Noise reduction can improve the picture quality if the television/video signal source is poor.
In addition, color disturbances (cross-color) which occur on the fine vertical black/white lines, are also reduced.

Press **IDTV** to call up the IDTV menu.

Select noise reduction with **P-** or **P+.**

Using the ◀ or ▶ buttons, select :

Off = if the signal is good;

Auto = for slightly disturbed color pictures, or

High! = This should only be used for pictures which are strongly distorted as otherwise "tracers" result when there are fast movements on the screen.

Press **i** to remove the menu from the screen.

Line flicker reduction

Television sets operate according to the interlaced scanning process, which means that each two frames are combined. This normally results in horizontal edges which move in 25 Hz cycles.
However, this 100 Hz television set reduces this effect.
This increase in picture quality is especially noticeable with cinema films.
When recording with an electronic camera, this function should only be used for films with little movement.

Test this function with a station test pattern.

Naturally, edge flicker reduction can also be appreciated during playback of cinema films via video recorder.

In addition, color stripes are also reduced during the search function on a video recorder.

Press **IDTV** button to call up the IDTV menu.

Select line flicker reduction with the **P-** or **P+** button.

You can switch this function on and off with the ◀ or ▶ buttons.

Press **i** to end the function.

Comb filter

When the PAL television system was introduced, it was the most superior system available. Even today it still offers excellent picture quality. However, the ability required at the time to receive black-white as well as colour broadcasts results in certain inadequacies in the form of the following picture disturbances.
The first disturbance is known as cross colour. This is observed as colour flickering on finely detailed objects (such as the flickering seen on materials with a hering-bone pattern, for example).
The second disturbance is known as cross luminance, and is observed as a nacreous streaking during colour transitions.

The comb filter can do away with these disturbances. Cross colour is eliminated, colour transitions are purer, and the picture is altogether sharper.

Call up the IDTV menu by pressing the **IDTV** button.

Select the comb filter with the **P-** or **P+** button.

Using button ◀ or ▶, you can choose between:

Auto = the comb filter is active during PAL- reception. The comb filter is automatically deactivated during video recorder operation. NTSC video operation is similarly enhanced as with PAL reception.

Off = the comb filter is off.

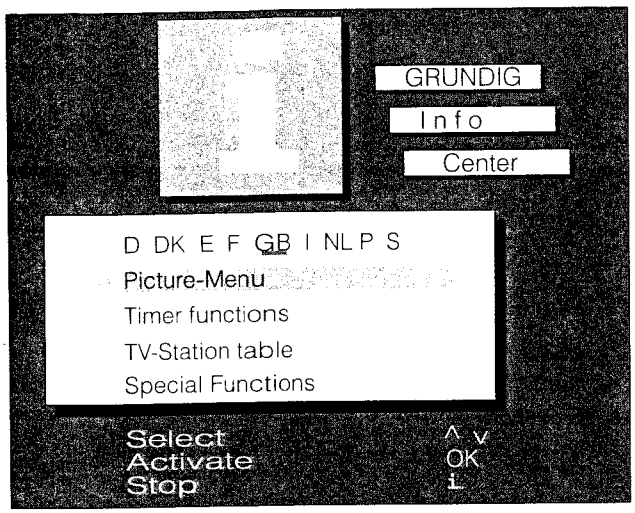
The menu disappears when you press button **i**.

GRUNDIG Info Center

Using the »GRUNDIG Info Center«, a variety of functions and settings can be carried out.

Calling up the GRUNDIG Info Center

Press the **i** button.
The Info Center appears.



Always note the user prompts in the lower part of the screen together with the dialogue lines.

1. Selecting a language

The symbols and text in the Info Center are available in several languages.
D (German) is set at the factory.

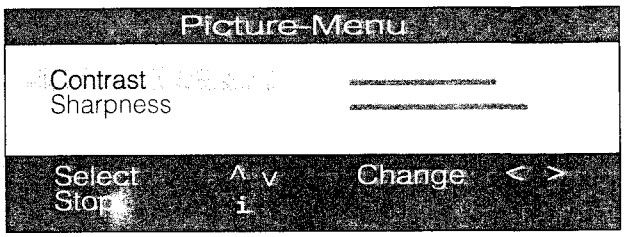
2. The Picture Menu

In the picture menu, you can adjust picture contrast and definition.

Call up the »GRUNDIG Info Center«.

Press **P-** or **P+** and select the picture menu.

Press the **OK** button.
The picture menu appears.



Make your selection with **P-** or **P+**;
the values highlighted in red can be changed by using the ◀ or ▶ buttons.

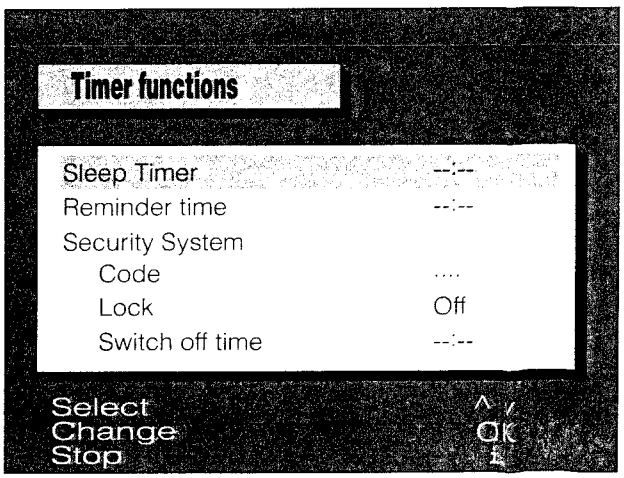
The changes made are automatically stored after exiting the picture menu.

3. The Timer functions

Call up the »GRUNDIG Info Center«.

Press the **P-** or **P+** button and select the line »Timer Functions«.

Press the **OK** button.
The »Timer Functions« appear.



1. Sleep Timer

The television set can automatically switch itself off according to a time you preset.

Proceed as follows:

Press the **OK** button.

When the sleep timer is activated, the current time plus 10 minutes is given.

Using **P-** and **P+** , times are entered in 10 minute intervals.

It is also possible to enter the time with the numeric buttons **1** ... **0** .

Press the **OK** button to conclude the entry.

Switch to TV mode with the **i** button.
At the programmed time, the television automatically switches itself off (to stand by).

2. »Reminder time«

Using this function, a reminder time will appear on the screen at the time you set.

Select the function with **P-** and enter the reminder time (see also Sleep Timer and corresponding user guide).

Press the **i** button and switch to TV mode.
The reminder time will appear at the set time, and blinks, for example »13:10«.
Press the **i** button.
This will cause the reminder time to disappear, but it nevertheless remains stored in the television's memory and will appear daily at the same time until it is changed or deleted.

Erasing reminder time from memory:

Select »reminder time« function with cursor button **P-** .

Press **OK** button.

Press **AUX** button.
Reminder time is errased.

Use the **i** button to activate T.V.

3. Security System

(Electronic combination lock)

The television can be set to switch off at a predetermined time, thus preventing unauthorized persons (such as children late at night) from switching the set on.

Setting the Program Lock

Select the function with **P-.**

Press the **OK** button.

Enter a five-place personal identification code with the numeric buttons **1** ... **0** .

Press the **OK** button.

Memorize your personal identification code!

If you should forget your personal identification code, refer to the key on the last page (envelope).

Activate programme lock by pressing the **P-** button once, and then press the **OK** button.

Set the switch-off time as described under »Sleep Timer«.

Proceed further according to the user guide on the screen. Note the dialogue lines.

Press the **i** button to switch to TV mode.

Clearing the Program Lock

If the television is switched on with the ProgramLock on, »Program Lock« will appear and blinks on the screen.

Enter your personal idenfication code using the numeric buttons **1** ... **0**. The television automatically switches on to TV mode.

The teletext decoder is equipped with a clock which is automatically started and set to the correct time as soon as the TV is switched on and a channel is selected which provides teletext service. Afterwards, the correct time is available even on channels without teletext. If you call up the timer function without first having tuned to a channel with teletext, the »Sleep Timer« and »Security System« can only be used by entering minutes.

4. The TV Station Table

ATS euro plus registers all programs which can be received. If other channels are added to the frequency range at a later date, these can be easily assigned to the TV Station Table. You can check their assignment at any time by calling up the TV Station Table.

Adding new TV channels

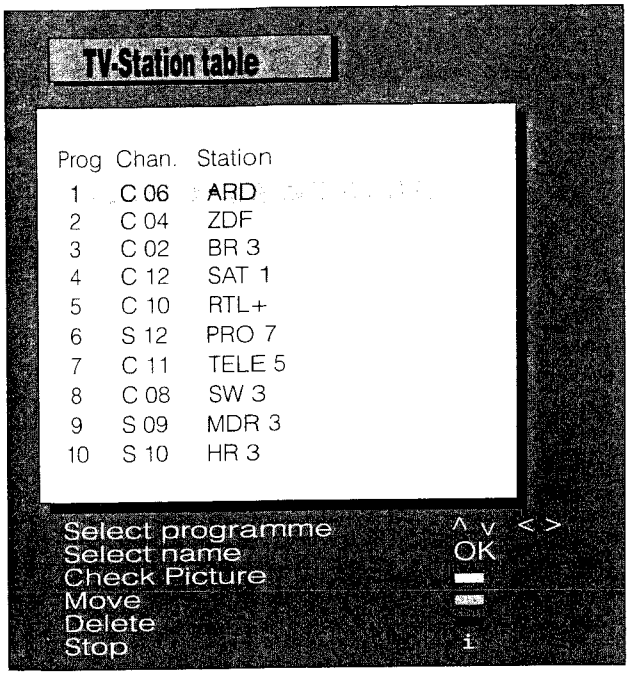
Call up the »GRUNDIG Info Center« :

Press the **i** button.

The Grundig Info Center appears.

Select the line »TV Station Table« with **P-**.

Press the **OK** button.
The »TV Station Table« appears.



Using the **P-** or **P+** button, select a channel location to which another channel is to be assigned.

Press the **OK** button.

Press ◀.

If you receive channels via cable which must be received on special channels, press **P+** or **P-** (S = Special channel, C = Channel).

Press ▶.

Enter the channel number with the numeric buttons **0 ... 9.**

To enter the station identification, refer to the dialogue lines or to the chapter »Assigning Channel Positions«.
Press the **OK** button to conclude the entry.
You can assign up to 99 channel positions.

The TV Station Table disappears when **i** is pressed.

Fine-tuning

Your television automatically adjusts the picture to provide the best picture quality possible. In difficult reception conditions, however, it may be necessary to fine-tune the picture as follows:

Call up the TV Station Table.

Select the channel position you want to fine-tune.

Press the **blue** button.

Press ◀ or ▶ .
Adjust the best picture possible.

Press the **blue** button once more.
The TV Station Table appears.

Adjustment of the television standard

Television stations in different countries transmit signals in differing television standards, with corresponding sound transmission methods. The table shows the differing standards in different countries. If you wish to enter programs of these stations in any program positions, you must adjust the television standard accordingly.

Call up the »TV channel table«.

Select the program position for which you wish to change the television standard with the **P+** or **P-** button.

Press the **blue** button.
The menu for the adjustment of the television standard is displayed.

Press the **P-** button.

Select the required television standard with the ◀ or ▶ button.

Press the **blue** button. The TV channel table is displayed.

The TV channel table is removed from the screen by pressing the **i** button.

Code	TV norm	Tone (MHz)	Application
PAL B/G	PAL B/G SECAM B/G NTSC (4,4 Mhz color)	5,5 FM	eg: FRG, Austria, Switzerland, Italy
SECAM L	FR-L/L' (SECAM)	6,5 AM	France only
PAL I-NICAM (GB)	GB-I (PAL) NICAM	6 FM/6.552 (NICAM)	eg: Great Britain, Ireland, Hong Kong (BFN)
SECAM D/K	OIRT (SECAM/PAL)	6,5 FM	eg: Eastern Bloc States, C.I.S., China
NTSC M	NTSC (3,5 Mhz color)	4,5 FM	U.S. norm (AFN)
NICAM (E-B-DK)	CCIR (PAL) NICAM	5,5 FM/5.85 (NICAM)	Spain, Belgium, Denmark
NICAM (S-N-SF)	CCIR (PAL) NICAM	5,5 FM/5.85 (NICAM)	Sweden, Norwege, Finland

Fixed color standard allocation

In difficult reception conditions (e.g. altered standards in cable TV systems), it is possible to assign a fixed color standard for the program position.

Press the **i** button

The Grundig Info Center appears.

Press the **P-** button to select the »TV station table« line.

Press the **OK** button.
The »TV station table« appears.

Press **P-** or **P+** to select the program position to which you wish to assign a fixed color standard.

Press the **OK** button, then press ▶ four times.

Press **P+** or **P-** until a comma appears.

Enter the abbreviation for the color standard as the last two characters of the station identification.

Abbreviation	Color standard
PB	PAL B/G/H/I
PN	PAL N
PM	PAL M
P4	PAL 4,43 Mhz color
SE	SECAM
NM	NTSC M
N4	NTSC 4,43 Mhz color
BW	black & white
MO	enforced mono

5. Special Functions

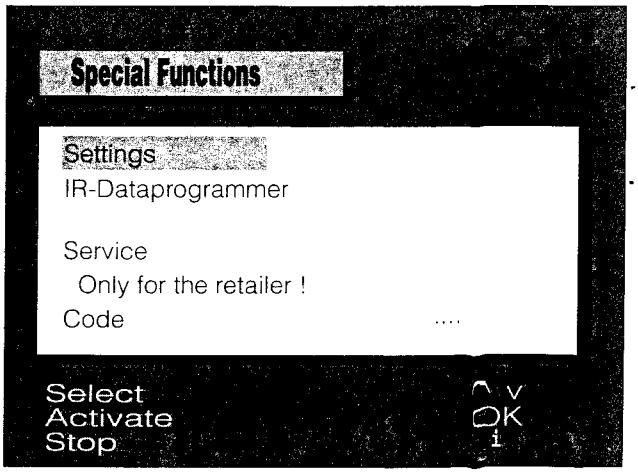
The menu Special functions is divided into three menu items. In the menu Settings, you can carry out basic settings. The functions IR-Data programmer and Service are only for your dealer. Service is protected by an identification number.

Calling up Special Functions

Call up the GRUNDIG Info Center.

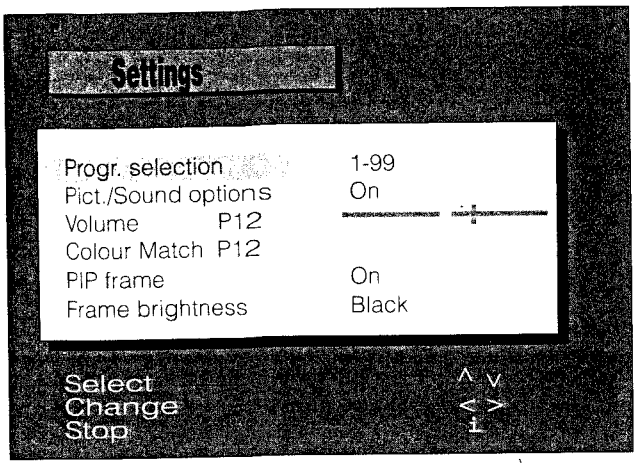
Continue to press **P-** or **P+** until »Special Functions« is highlighted in red.

Press the **OK** button.
An overview of »Special Functions« appears.



Calling up the »Settings« menu

Press the **OK** button.
The Progr. selection is highlighted in red.



One- or two-place channel selection

Call up the menu »Settings«.
If you have assigned less than 10 channel positions you should limit the program selection to between 1-9.

Change function with ◀ or ▶.

Press **i** to return to the channel you are currently watching.

Picture/Sound scale

Call up the »Settings« menu.
Select the »Picture/Sound scale« with **P-**.
The line appears highlighted in red.

Using ◀ or ▶, select which scale you wish to see, such as:

Press **i** to switch back to the channel you are currently watching.

Changing the volume of a channel position

If you receive a program whose volume deviates from other channels (too loud or low), this volume can be adjusted as follows:

Call up the »Settings« menu
Select »Volume« with **P-**
The line appears highlighted in red.

Use ◀ or ▶ to change the volume. Only the volume of the program currently being viewed is changed.

Press **i** to switch back the channel being viewed.

Color registration

Call up the »Settings« menu
Select »Color registration« with **P-**.
The line appears highlighted in red.

Use ◀ or ▶ to change the color registration. Only the color registration of the program currently being viewed is changed.

Press **i** to switch back the channel being viewed.

Micro-picture frame

Call up the »Settings« menu
See also one- or two-place program selection.

Select »Micro-picture frame« with **P-** on the remote control.
The line appears highlighted in red.

Select the micro-picture with a frame (on) or without a frame (off) by using ◀ or ▶.

Press **i** to switch back the channel being viewed.

Frame brightness

Call up the »Settings« menu
See also one- or two-place program selection.

Select »Frame brightness« with **P-** or **P+**.
The line appears highlighted in red.

Using ◀ or ▶, choose between a black, grey or white frame for the displayed micro-picture (in the Picture-in-Picture function).

Press **i** to switch back the channel being viewed.

Picture and Sound Adjustment

Switching off the sound

You can switch off the sound of your television by pressing the 🔈 button.
»Sound mute« appears on the screen when you switch the sound off.

You can switch the sound on again by either pressing the 🔈 button, or switching to another channel.

All picture and sound scales can be switched on and off, as desired.
Refer to GRUNDIG Info Center – Settings.

Switching picture format from 4:3 to 16:9

If your television operates in conjunction with a satellite receiver at the D2 MAC television norm with a picture format of 16:9, you will need to change the conventional 4:3 format to 16:9.

Press the **16:9** button.
The selected format (for example, 4:3) appears.

Press **16:9** once more.
The picture format has been changed and the selected format is displayed.

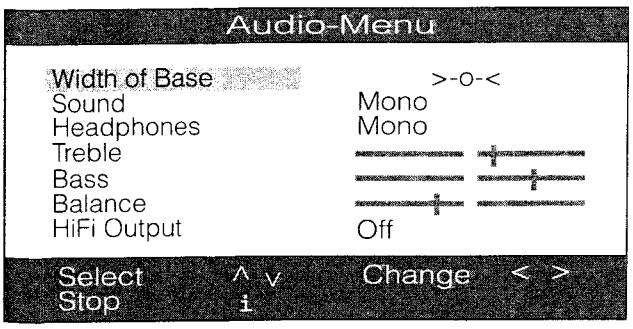
Press the **16:9** button again.
The chosen format (e.g. 4:3/16:9 auto) is shown.
It switches automatically to the correct format.

You can switch back to the 4:3 format by repeating this procedure.

The Audio Menu

Calling up the audio menu:

Press 🔈; Audio → OK appears.
Press the **OK** button.



Press the **i** button to clear the menu.

Base width

This improves the acoustic pattern during stereo transmissions and improves the sound of mono transmissions.

Select with the **P-** or **P+** buttons.

Adjust with the ◀ or 🔈 buttons.

Sound

If the television receives programs with dual sound track, e.g. a film with the original sound on sound channel 2 (NICAM B) and the synchronized version on sound channel 1 (NICAM A), you can

select the sound channel with **P-** or **P+**,

change the sound channel with ◀ or 🔈.

If the television receives stereo programs or NICAM programs, it automatically switches to stereo or NICAM sound reproduction.
The word STEREO or NICAM appears on the screen.
If the stereo or NICAM sound reproduction is poor in quality, you can use ◀ or 🔈 to switch to »Mono sound reproduction«.

The volume can also be changed without calling up the audio-menu by pressing the **AUX** and 🔈 keys.

If you wish to always receive a channel saved in a channel position in mono, then enter »,MO« as a station identification starting with the fourth position (e.g. ARD,MO).
See chapter entitled »entering station identification«.

Headphones

Two-channel sound is also available when you use headphones.

Select with the **P-** or **P+** buttons.

Adjust with the ◀ or 🔈 buttons.

Treble, bass and balance

The sound can be adjusted according to your individual taste.

Select with the **P-** or **P+** buttons.

Adjust with the ◀ or 🔈 buttons.

HiFi sound output

Select with **P-** or **P+**.

Change with ◀ or 🔈.

You can choose between off, linear and variable.

off = HiFi function is turned off.
linear = constant sound level for HiFi systems. Adjustment of HiFi system possible.

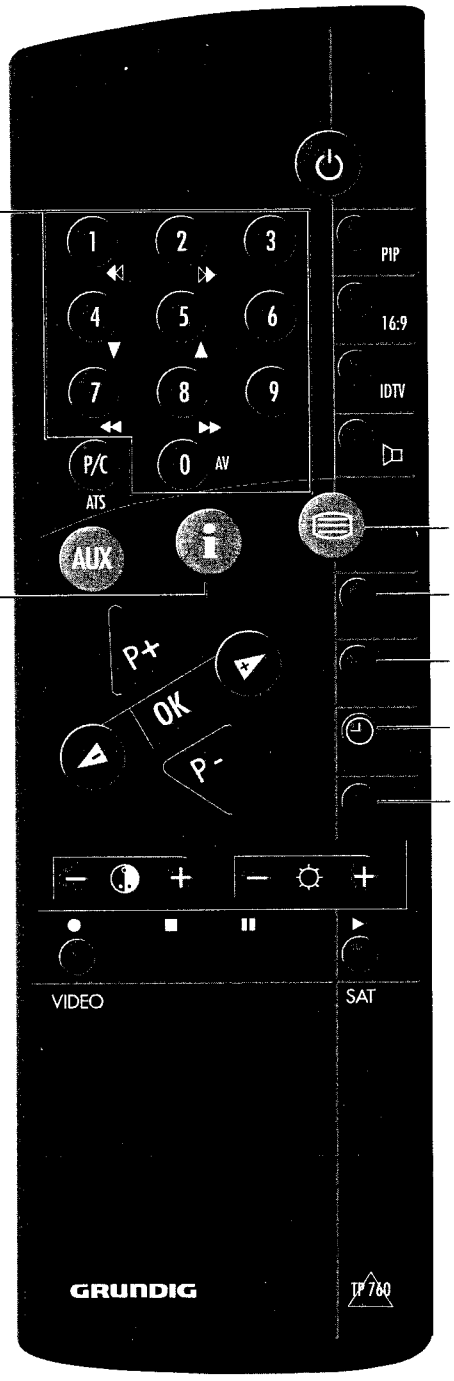
variable = Sound volume, balance, high and low tones are adjusted from the television set.

The loudspeakers are turned off.

Teletext Mode

Page selection 100-899

Call up "GRUNDIG Top Text"
You can go to "GRUNDIG Top Text". from any operating mode.
For Fastext, this button takes you to the overview page broadcast by the station your are currently tuned to.



Teletext mode ↔ TV mode

Blue button switches to the next block

Yellow button switches to the next group with overrun to the next block.

Green button switches to the next page with overrun to the next group.

Red button Scroll back

Fastext (Flof)

The colored buttons are for the topics listed in the dialogue lines.

Teletext is a service provided free of charge by television stations and is transmitted together with the television signal in the form of texts, graphic representations and subtitles which are visible on your screen.
Your television offers you information pages and dialogue lines. The information in the dialogue lines indicates the various functions available as well as the buttons provided for these functions.

Teletext Mode

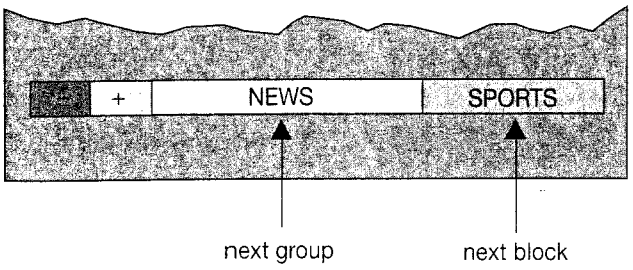
Quick TOP teletext

TOP, which stands for »Table Of Pages«, is a recent innovation which simplifies and accelerates the selection of teletext pages.

TOP allows you to select teletext pages without knowing their page numbers. TOP does this by arranging all the pages according to topics - also called blocks - similar to a filing cabinet.

For example, all news items are listed under »News«. Further topics include the blocks »Sports«, »TV Programs« and »Services«. These blocks in turn are divided into several groups; »News«, for example, is divided into politics, economics and culture. The normal teletext pages are found within these groups.

The user guide on the screen makes using TOP extremely easy. A comment line in different colors is shown at the bottom of the screen. The colors are identical to the ones on the remote control. The yellow field indicates which block has been selected as well as the following group, while the blue block indicates the next block.



You switch from block to block with the blue button, from group to group with the yellow button, and you scroll forward with the green button. The red button returns you to the previous page of a group or block.

TOP takes you quickly and reliably to the teletext page you want. A 32-page memory with optimized memory utilization provides considerably shorter access times.

For teletext services without TOP

The decoder compiles its own table of page numbers by means of the received teletext pages and thus simulates TOP mode.

Note

If the aerial signal is only marginal, teletext pages may exhibit disturbances. If fine-tuning the television brings no improvement, have your aerial system checked.

Teletext Mode

What you should know

The teletext mode »TOP« requires certain additional information from each television station. For this reason, always wait a few seconds for the GRUNDIG Quick TOP decoder to read the required information into its memory after switching the television on or changing to a different channel.

With the ▤ button, you can return immediately to normal television viewing from any mode.

Always note the user guides and the dialogue lines at the bottom of the screen.

Using the **P-**, **P+**, ◀, ▶ buttons on your remote control, you can select functions of the user guide and activate them by pressing the **OK** button.

Switching on teletext

Press the ▤ button on the remote control.

Page 100 (the teletext page of contents) or the most previously viewed teletext page appears.

TOP mode

A red, green, yellow and blue field is shown at the bottom of the screen. Buttons of the same colors are found on the remote control.

With the **red** button of the remote control, you scroll backwards one page.

With the **green** button of the remote control, you scroll to the next available page (with overrun to the next group).

With the **yellow** button of the remote control, you switch to the next group. After the last group of the selected block, your are automatically taken to the next block (overrun).

With the **blue** key of the remote control, you switch from block to block.

Teletext without TOP

If you do not have TOP, the blue button takes you to the next available 100´s page, with the yellow to the next available 10´s page and with the green to the next available normal page.

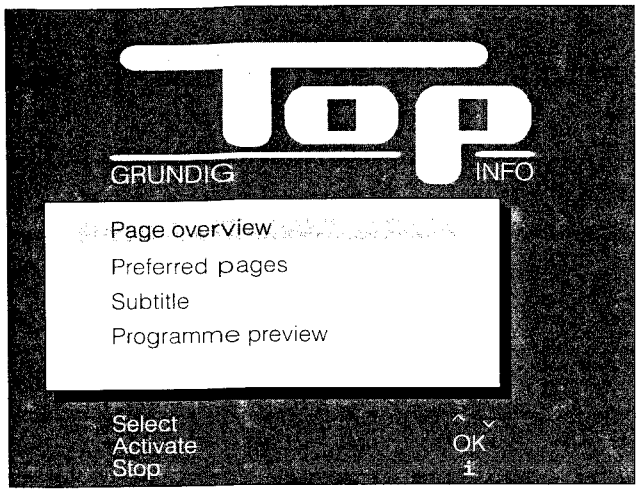
Teletext Mode

»GRUNDIG Top Text« menu page

Call up teletext with the ▤ button.

Press **i** on the remote control.

The GRUNDIG Top Text menu page appears.



Please note the user guide at the bottom of the screen: this guides you to the item you desire.

Page overview

This provides you with an overview of the offered block and group pages currently offered by the teletext service. For teletext without TOP, the numbers of the transmitted pages are displayed.

Press the **OK** button.

The page overview appears.

All of the listed blocks and groups can be selected with the **P-**, **P+**, ◀, ▶ buttons and activated by pressing the **OK** button.

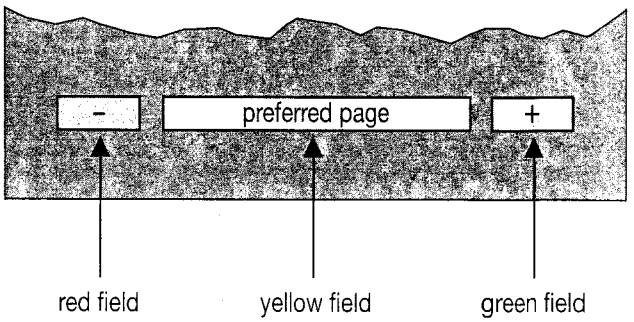
Refer to the user guide on the screen.

The following three functions are not possible for teletext without TOP.

Preferred pages

This provides you with an overview of those pages which are considered of special interest by the television station.

Select as described in Page overview.
The following appears at the bottom of the teletext page:
- Preferred page +.



The **green** button is used to scroll forward from one Preferred page to another, the **red** is used to scroll backwards, and you can return to the menu with the **yellow**.

Subtitle pages

If the program you are currently viewing is provided with subtitles, you can call them up via »Subtitles«.

Press the **OK** button.

Program preview

This is used to switch directly to the Program preview of the station you are currently viewing.

Press the **OK** button.

Teletext Mode

Doubling character size

Press the **AUX** button.

Select ⊜↑ with buttons ◀ or ▶.

Repeatedly pressing the **OK** doubles the character size in the following order:
upper half of the picture,
lower half of the picture,
return to normal picture.

Watching television during teletext operation

Updating pages

Certain teletext pages are constantly updated, such as stock market reports and sporting events, as well as the latest news.

If you want to watch television and nevertheless remain informed, first select a page of your choice, and then

press the **AUX** button.

Select ⊜X with the ◀ or ▶ buttons.

Press the **OK** button.

The program is still visible for viewing, and at the top of the screen, the teletext symbol appears.
When Neue Meldung appears in the infomation line,

press the **AUX** button.
The updated teletext page appears.

You can also use this function to bypass waiting times when the TOP teletext decoder searches for a page, or while subpages of multiple pages are being read in. As soon as the page is found, the message »Abrufbereit« appears in the info line.

Subpages

Several subpages can be combined under a single page number which are then automatically scrolled at an interval determined by the television station. This is indicated by the symbol » at the bottom right, or, for example, with 2/4 below the time, which indicates that you are looking at the second of four pages.

Multiple pages

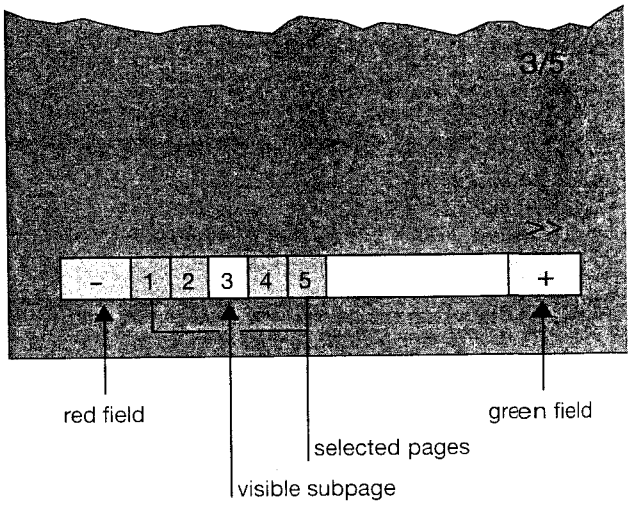
A page from multiple pages is selected.

Press the **AUX** button.

Select /00 with the ◀ or ▶ buttons.

Press the **OK** button.

The page number of the subpage (violet) currently visible is first displayed on a white bar between the red - and green + coloured fields. The remaining pages are then read in and the numbers of the subpages (blue) are displayed.



You scroll forward from one subpage to another with the **green** button, and scroll back with the **red** button. The number of the displayed subpage changes from blue to violet.

Press the **OK** button, the function is cancelled.

Alarm page (directly calling up subpages)

Multiple page has been selected.

Press the **AUX** button

Select /00 with the ◀ or ▶ buttons.

Press the **OK** button

Using the numeric buttons, enter the desired four-place subpage number. For example, the second page sequence 0002. The desired subpage is sought and displayed.

The selected page number, for example S155/---- appears in the info line.

Press the **OK** button, the function is cancelled.

Teletext Mode

Stop

Page read-in is terminated.

Press the **AUX** button.

Select STOP wit the ◀ or ▶ buttons.

Press the **OK** button,
stop appears in the upper screen. The contents of the displayed page are now »fixed«, meaning that it is no longer updated, and you remain on this page.

Press the **OK** button,
the »Stop« function is cancelled.

Page catching

This function allows you to select a page without entering the corresponding page number. Using the cursor, you can select specific teletext pages from the overview pages (pages designated with a three-place page number). You can use this function to dispense with entering the three-place number.

Press the **P-** or **P+** buttons.
»Page Catching« appears in the upper part of the screen.
A highlighted square (cursor) blinks on the first or last page number of the overview.

Using the **P-** or **P+** buttons, move the cursor to the desired page number.

Press the **OK** button.
The desired page appears on the screen.

Current program/Subtitles

(only for stations which provide TOP-teletext service)

In the TV mode, press the red button. The current program appears highlighted in blue and subtitles in yellow.

Press the **yellow** button.
The title of the current program as well as its beginning and end appear.

Press the **blue** button.
The TV subtitles appear.

Press the ▤ button.
This cancels the function.

Connection Capabilities and Operation

... of stereo headphones

Connection:

Insert the headphone jack (3,5 mm ∅) into socket ③.

Operation:

Press the **AUX** button, and adjust the volume with the ◀ or ▶ buttons.
The adjusted volume is displayed on a scale.

For two-channel selection while operating the headphones, refer to the audio menu.

... with additional loudspeakers

Connection:

Connect the additional loudspeakers (4 Ω impedance) to the sockets ⑦ at the back of the set (R = right, L = left).
The bass loudspeakers of the TV set are automatically disconnected.

Loudspeaker selector

for operation with external loudspeakers.

Switch pressed down: the external loudspeakers operate as broadband speakers.

Switch not pressed down: the external loudspeakers operate as bass loudspeakers.

... of a satellite receiver

Connection:

Connect your satellite receiver to the black EURO-AV socket ⑭ with a suitable cable.

Operation:

Contiue to press the **0 AV** button until A 1 appears.

Keeping the **SAT** button depressed, enter the desired channel position with the numeric buttons **1 ... 0**.

... of a decoder

Certain television stations which broadcast via cable scramble their programs, meaning that the sound and picture signals your television receives are purposely distorted. You can unscramble such transmissions with a decoder.

Connect your decoder to the black EURO-AV socket ⑭ and switch it on.

When allocating the channel positions with ATS euro plus, a Premiere-Decoder is automatically recognized and the necessary adjustments are executed.

On your televison, select a scrambled channel position. Press the **AUX** and **0 AV** buttons.
»Descrambler off« appears.
By repeatedly pressing the **0 AV** button, the following functions can be selected:

Descrambler on Auto
Automatic switching to mono, stereo, or two-channel broadcasts. This depends on the broadcast received via aerial.

Descrambler on Stereo
The left and right sound channels of additional units connected to the black EURO-AV socket are switched through to the speakers.

Descrambler on Mono-L
For mono-L, the left sound channel is switched to both speakers.

Descrambler on Mono-R
For mono-R, the right sound channel is switched to both speakers.

The scrambled programs are routed from the television to the decoder, are descrambled, and then are routed back to the television, where the unscrambled signals can be viewed as a normal television program.

The blue EURO-AV socket is used for recording with a video recorder. If a program location is to be set up for which decoder operation may be unsuitable, press the AUX button and then the OAV button until Descrambler off appear

Channel positions for additional units

Any given channel position can be used for playback from any connected unit connected to the black EURO-AV socket (for example, from a video recorder with switching voltage to pin 8 of the EURO-AV socket).

For example, you receive three television channels and would like to assign a video recorder to the fourth channel position.

Select channel position 4 with the numeric buttons.

Set as described under »... of a decoder«.

Connection Capabilities and Operation ...

... of a video recorder

Connection:

With an AV cable, connect the video recorder either to the black ⑭ or blue ⑬ EURO-AV socket, or to the aerial socket ⑯ with a 75 Ohm aerial cable.

Operation:

Video recorder connected to the black EURO-AV socket ⑭:

Press the **0AV** button repeatedly until A 1 appears on the screen.
The picture/sound signal of the video recorder, which is connected to the black EURO-AV socket, can be switched to any channel position (refer to »Channel positions for additional units«).
Start video recorder playback.

Video recorder connected to the blue EURO-AV socket ⑬:

Press the **0AV** button repeatedly until A 2 appears on the screen.
Start video recorder playback.

Video recorder connected to the aerial socket ⑯:

Assign the playback channel specified by your video recorder (between 30 and 40) to any channel position (for example, P16) (refer to »TV Station Table«). If you do not know the playback channel of your video recorder, start playback and search for the channel by means of the channel search of your television (refer to the section »Assigning Channel Positions«).
Note the channel position for subsequent video playback.
If desired, you can fine-tune the video picture (refer to the section »Fine-tuning«).

Operation:

Select the TV Station Table in the Info Center (refer to user guide).

Select the desired channel position.

Enter your video recorder's playback channel.

Enter AV for the station identification (no horizontal flickering in the upper part of the picture – modification of the time constant –).
Example:

Prog.	Channel	Station
16	C 37	AV...

... of a camcorder

Connection:

Connect the camcorder to the FBAS socket ⑪ with a suitable connection cable. The sound must be separate via both cinch sockets ⑫.

Operation:

Press the **0AV** button repeatedly until A 3 appears on the screen.
Start camcorder playback.
The camcorder recording is seen on the screen.

... of S-VHS video recorders, S-VHS cameras or Hi 8 camcorders

You get even better picture quality when you connect a S-VHS video recorder, a S-VHS camcorder or a Hi 8 camcorder to the S-Video socket ⑩. This is because both the color and brightness signals can be processed separately, ensuring that they cannot influence each other; cross-color luminance, for example, is eliminated. The sound must also be seperated via both cinch sockets ⑫. For mono units, connect the sound cable to the L socket ⑫.
Connection to the black EURO-AV socket is also possible.

Operation:

Connection to the S-Video socket ⑩:

Press the **0AV** button repeatedly until A 4 appears on the screen.

Start playback on the camera or the video recorder.

The recording can be seen on the screen.

Connection to the black EURO-AV socket ⑭:

Press the **0AV** button repeatedly until A 5 appears on the screen.

Start playback on the camera or the video recorder.
The recording can be seen on the screen.

Connection Capabilities and Operation ...

Copying recordings via the television (Transfer mode)

You can record from one video recorder to another, or from a camcorder to a video recorder, or from a S-VHS video recorder to another video recorder.

Proceed as follows:

Connection:

Connect the playback recorder or the camcorder to the black EURO-AV socket ⑭. Connect the camcorder to the cinch FBAS socket ⑪, connect R IN L ⑫. Connect the S-VHS camera or the Hi8 camcorder to the S-VIDEO socket ⑩, R IN L ⑫.

Connect the **recording** recorder to the blue EURO-AV socket ⑬.

Operation:

Select the input socket with the **0 AV** button.

A 1 : bottom EURO-AV socket (black) ⑭
A 3 : FBAS socket ⑪
A 4 : S-VIDEO socket ⑩

For both A 3 and A 4, the sound must be separately connected via both cinch sockets ⑫.

Press the **AUX** button and then the **0 AV** button.

»Copy« appears on the screen. You are now free to watch any channel on your television without disturbing the recording.

Cancel the »Copy« function.

Press the **0 AV** button, **AUX** button, and then press the **0 AV** button.

Adjusting the picture and sound during video playback

During video playback, if there are deviations in the picture and sound as compared to the picture and sound you are normally accustomed to (for example, the sound is too loud, or the colors are too bright), you can change these settings and store them with the remote control (doing so does not change the basic seting of the television picture).

Video recorder remote control

This television's remote control can also be used to remotely control Grundig video recorders. Consult your dealer for models which offer this function.

Press the **VIDEO** button and keep depressed.
This switches the remote control to video recorder mode.
Then press the desired function key.

The following is a list of the buttons used to operate a video recorder:

◀◀ (Numeric button 1) = Picture search, reverse
▶▶ (Numeric button 2) = Picture search, forward
● (Button - ⏺) = Record start
■ (Button ⏺ +) = Stop
◀◀ (Numeric button 7) = Quick reverse
▶▶ (Numeric button 8) = Quick forward
II (Button - ☼) = Pause
▶ (Button ☼ +) = Play
▼ (Numeric button 4) = Channel position -
▲ (Numeric button 5) = Channel position +

Technical Data

Mains voltage:

220-240 V, 50/60 Hz
(Power supply control range 190 ... 264 V)

Power consumption:

approx. 175 W
In stand by: 5 W

Channel coverage:

C01 ... C99
Special channels S01 ... S41

Sound output:

Stereo: 100 W active music power

Service note for the dealer:

This device is provided with a pluggable power supply cable. For replacements, contact the nearest customer service center and always indicate the following order number:
M 82-102 IDTV: 8290-991-307
M 92-102 IDTV: 8290-991-308

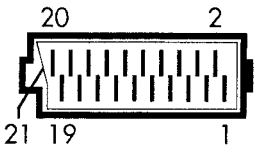
This device conforms to VDE safety regulations and directives of the Deutsche Bundespost (German Federal Post Office; see certification mark on the type sticker on the rear of the device.), as well as all relevant ordinances governing X-ray emissions. The picture tube, which emits X-rays, is sufficiently shielded and therefore represents no danger. Accelerating voltage is a max. 34 kV/ with a mean beam current of 1,5 mA.

Unauthorized tampering with the device, in particular making adjustments to the high voltage system, or installing a different picture tube, can considerably increase X-ray emissions. Devices so altered no longer conform to applicable safety regulations and may not be operated.

EURO-AV pin assignment ⑭

If you want to connect other devices to your television (for example, a computer or amplifier), your dealer can provide you with a normed standard connection by means of the following table:

Pin		Signal
1	=	Audio output, right
2	=	Audio input, right
3	=	Audio output, left
4	=	Audio earth
5	=	Blue, earth
6	=	Audio input, left
7	=	RGB blue, input
8	=	Switching voltage
9	=	Green, earth
10	=	–
11	=	RGB green, input
12	=	–
13	=	Red, earth
14	=	Earth
15	=	RGB red, earth
16	=	RGB switching voltage
17	=	Video earth
18	=	RGB switching voltage, earth
19	=	Video output
20	=	Video input
21	=	Shielding/earth



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